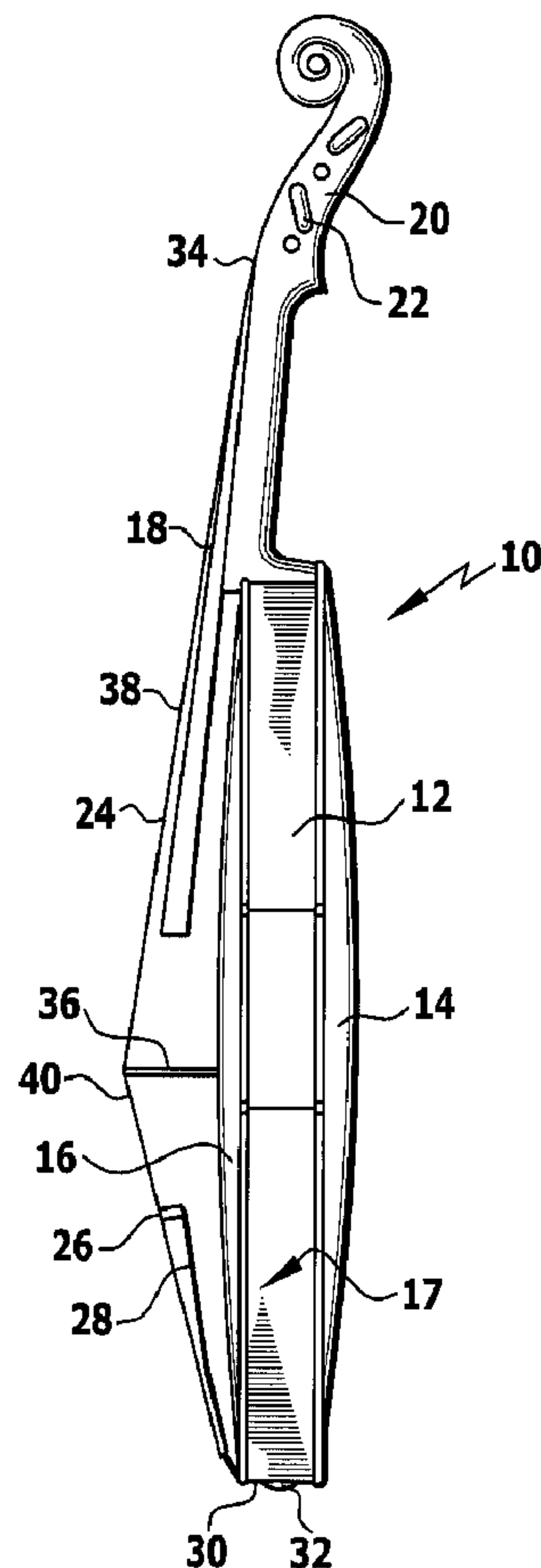




(86) **Date de dépôt PCT/PCT Filing Date:** 2008/10/14
(87) **Date publication PCT/PCT Publication Date:** 2009/05/14
(45) **Date de délivrance/Issue Date:** 2016/06/07
(85) **Entrée phase nationale/National Entry:** 2010/04/30
(86) **N° demande PCT/PCT Application No.:** EP 2008/063807
(87) **N° publication PCT/PCT Publication No.:** 2009/059873
(30) **Priorité/Priority:** 2007/11/05 (DE10 2007 054 312.5)

(51) **Cl.Int./Int.Cl.** *G10D 3/14* (2006.01)
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(54) **Titre : CHEVILLE D'ACCORD PRECIS**
(54) **Title: TUNING PEG**



(57) **Abrégé/Abstract:**

A tuning peg for a stringed musical instrument is suggested, including a shank with a first area which forms a string supporting area and at least one additional area which forms a mounting area for fixing the tuning peg to the stringed musical instrument, wherein



(57) Abrégé(suite)/Abstract(continued):

the first area is rotatable relative to the at least one additional area, a first gear wheel which is connected non-rotatably to the first area, at least one additional gear wheel which is connected non-rotatably to the at least one additional area, a head which is arranged on the shank so as to be rotatable about an axis of rotation and at least one drive gear wheel which is arranged on the head and which acts on the first gear wheel and the at least one additional gear wheel.

Abstract

A tuning peg for a stringed musical instrument is suggested, including a shank with a first area which forms a string supporting area and at least one additional area which forms a mounting area for fixing the tuning peg to the stringed musical instrument, wherein the first area is rotatable relative to the at least one additional area, a first gear wheel which is connected non-rotatably to the first area, at least one additional gear wheel which is connected non-rotatably to the at least one additional area, a head which is arranged on the shank so as to be rotatable about an axis of rotation and at least one drive gear wheel which is arranged on the head and which acts on the first gear wheel and the at least one additional gear wheel.

Tuning Peg

The invention relates to a tuning peg for a stringed musical instrument.

5 Strings of a stringed musical instrument are held on the peg box via pegs.

A tuning peg is a peg which makes tuning of a string possible.

Pegs are known from US 1,802,937, US 1,669,824, US 1,604,367,
 10 DE 38 28 548 A1, US 1,506,373, US 5,998,713 or EP 1 453 034 A2.

The object underlying the invention is to provide a tuning peg which can be fixed to a stringed musical instrument with a minimal effect on it and makes simple tuning possible.

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This object is accomplished in accordance with the invention, with the tuning peg specified at the outset, in that a shank is provided which has a first area forming a string supporting area and at least one additional area which forms a mounting area for fixing the tuning peg to the stringed musical instrument,
 20 wherein the first area is rotatable relative to the at least one additional area, a first gear wheel which is connected non-rotatably to the first area is provided, at least one additional gear wheel which is connected non-rotatably to the at least one additional area is provided, a head which is arranged on the shank so as to be rotatable about an axis of rotation is provided and at least one
 25 drive gear wheel which is arranged on the head and which acts on the first gear wheel and the at least one additional gear wheel is provided.

With the solution according to the invention, a gear wheel gearing device is provided which includes the first gear wheel, the at least one additional gear
 30 wheel and the at least one drive gear wheel. As a result of a rotary movement of the head, the at least one drive gear wheel can roll on the first gear wheel and the at least one additional gear wheel and thereby bring about a rotation of the first area in relation to the at least one additional area. The tuning peg

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may be of a compact design as a result of the arrangement of the gear wheel gearing device in the head.

As a result of a different number of teeth for the first gear wheel and the at
5 least one additional gear wheel or for the at least one drive gear wheel, a transmission ratio may be set which allows tuning of the strings.

In addition, the gear wheel gearing device may be designed to be self-locking in a simple manner. As a result, the torque which is exerted on the first area
10 on account of the tension of a string can be absorbed by the gearing device and the first area is prevented from turning back. On the other hand, this results in an optimized tuning capability with a simple operability.

The self-locking design may be achieved, for example, in that the first gear
15 wheel and the additional gear wheel are designed with pitch circles of approximately the same size and the torque exerted on these gear wheels is in opposite directions.

A high transmission ratio may be set as a result of at least two gear wheels
20 being used. For example, a transmission ratio of 7:1 or higher may be achieved in a simple manner in order to be able to effect tuning.

Furthermore, the gear wheel gearing device may be designed such that, as additional area, a second area and a third area are not rotatable relative to
25 one another. As a result, torque which is exerted on the stringed musical instrument as peg torque as a result of the mounting of the tuning peg is kept small. As a result, it is possible, on the other hand, to fix the tuning peg to the stringed musical instrument by way of press fitting without additional connecting aids, such as adhesive and/or form locking elements, needing to be
30 provided.

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It is particularly advantageous when the at least one drive gear wheel is arranged at least partially in an interior space of the head. This results in a compact construction. The mechanism of the gear wheel gearing device for rotation of the first area is also protected to the outside as a result.

The at least one drive gear wheel is favorably arranged so as to be offset in relation to the axis of rotation of the head on the shank. As a result of such an eccentric arrangement of the at least one drive gear wheel, the at least one drive gear wheel can be caused to move on an orbital path around the axis of rotation when the head is rotated. As a result, it can roll on the first and the at least one additional gear wheel and cause them to rotate, whereby the first area and the additional area are, on the other hand, rotated relative to one another.

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The at least one drive gear wheel is, in particular, rotatable about a drive gear wheel axis of rotation in order to enable it to roll on the first and the at least one additional gear wheel.

20 It is favorable when the at least one drive gear wheel axis of rotation is oriented parallel to the axis of rotation of the head on the shank. This results in a simple constructional design and the dimensions of the head may be minimized.

25 In one embodiment, the at least one drive gear wheel is a pinion or includes a pinion. Such a pinion has, in particular, a smaller external diameter and a smaller pitch circle diameter than the first gear wheel and the at least one additional gear wheel. This results in a compact construction and the dimensions of the head may be kept small. It is, in principle, also possible for

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the at least one drive gear wheel to be designed as a combination of several gear wheels. Divided gear wheels can, in particular, be provided.

It is, in addition, favorable when the first gear wheel is positioned in an interior space of the head. This results in a compact construction with a simple production capability.

It is likewise favorable when the at least one additional gear wheel is positioned in an interior space of the head. This results in a compact construction.

It is particularly favorable when a gear wheel gearing device which includes the first gear wheel, the at least one additional gear wheel and the at least one drive gear wheel is positioned in an interior space of the head. As a result, the shank can be designed in a simple manner and, in particular, the diameter of the shank can be kept small and so adaptation to a musical instrument is possible in a simple manner.

The first area and the at least one additional area follow one another on the shank, in particular, in a longitudinal direction parallel to the axis of rotation of the head. This results in optimized dimensions.

It is, in principle, possible for a tuning peg to have only one mounting area and one string supporting area. Such tuning pegs can be used, for example, on plucked instruments, such as guitars, or also on zithers. In one embodiment, a second area and a third area are provided and these form respective mounting areas, wherein a second gear wheel is connected non-rotatably to the second area and a third gear wheel is connected non-rotatably to the third area. As a result, a relative rotatability of the first area not only in relation to the second area but also in relation to the third area may be

